

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

The clarity objection to Claim 3 has been obviated by amendment.

Claims 1, and 3-4 stand rejected under 35 USC 103. This contention is respectfully traversed.

However, the indication that Claims 2 and 7 would be allowable if rewritten to include the limitations of any claims on which they depend is appreciatively noted.

The present application relates to the manufacture of vertical ferrocacitors. Particularly, the present application solves the problem of fences forming on the ferroelectric material through etching of the insulating layer. The present application avoids the creation of these fences by maintaining a film of ferroelectric material over the insulating layer. A layer of electrode material deposited on the ferroelectric layer before etching the bottom insulating material, and so maintains a protective layer over the ferroelectric material. Hence any residue material formed by the etching of the insulating layer is then prevented from forming on the ferroelectric layer.

Claim 1 requires a vertical capacitor. Okita is a horizontal capacitor.

Claim 1 requires that the ferroelectric material is deposited over an insulating layer. Figure 3D shows the ferroelectric film 14 on the conductive film 13. Paragraph 0063 does not even refer to an insulating layer, nor is this found elsewhere in the disclosure. Clearly, the ferroelectric material in Okita is not on an insulating layer, as it is instead on a conductive film.

Claim 1 requires a first etching step of etching the ferroelectric material to form openings in it. Figure 3E shows the ferroelectric film 14 completely removed down to the insulating film 8.

Claim 1 requires depositing an electrode layer into the openings formed in the ferroelectric layer. Figure 3F shows the capacitor protective film 18 deposited on the insulating film 8. The protective film 18 is at least alumina and protects the capacitor, so it is not described as being an electrode. Any reputable technical text refers to alumina as an electrical insulator. Therefore, if any of the prior art of record suggest otherwise, it is clearly inaccurate. The state of the art must be determined from reputable sources that are accepted in the art as being authoritative. Should the Examiner disagree, a reference supporting the point is requested.

Claim 1 requires a second etching step, after depositing the electrode layer, of etching to remove the electrode layer

and the insulating layer at the bottom of the openings. Figure 3I shows the protective film 18 and insulating film 8 etched. Again, protective film 18 is not an electrode layer. And, again, the insulating film 8 in Okita is not the same insulating layer referred to in Claim 1.

Claim 1 requires inserting conductive material into the openings. In figure 3J a glue film 21a is formed in the etched hole. It would not appear that this glue film is conductive.

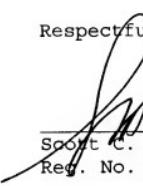
Okita is very different from the method of Claim 1. For each requirement of Claim 1, Okita does not disclose the required features. There is no suggestion or motivation as to how the very different method in Okita could be changed to arrive at the method of Claim 1.

It is believed that all of the pending claims have been addressed in this paper. However, failure to address a specific rejection, issue or comment, does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above are not intended to be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any

claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Applicants asks that all claims be allowed. No fee is believed to be due, however please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

  
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